

Exhibit 300: Capital Asset Summary

Part I: Summary Information And Justification (All Capital Assets)

Section A: Overview & Summary Information

Date Investment First Submitted: 2010-09-17
Date of Last Change to Activities: 2012-08-23
Investment Auto Submission Date: 2012-02-27
Date of Last Investment Detail Update: 2012-02-27
Date of Last Exhibit 300A Update: 2012-08-23
Date of Last Revision: 2012-08-23

Agency: 021 - Department of Transportation **Bureau:** 12 - Federal Aviation Administration

Investment Part Code: 01

Investment Category: 00 - Agency Investments

1. Name of this Investment: FAAXX806: NextGen R&D Demonstrations and Infrastructure

2. Unique Investment Identifier (Ull): 021-256003437

Section B: Investment Detail

- 1. Provide a brief summary of the investment, including a brief description of the related benefit to the mission delivery and management support areas, and the primary beneficiary(ies) of the investment. Include an explanation of any dependencies between this investment and other investments.**

NextGen is a series of inter-linked programs, systems, and policies that implement advanced technologies and capabilities to dramatically change the way the current aviation system is operated. NextGen is satellite-based and relies on a network to share information and digital communications so all users of the system are aware of other users' precise locations. The DEMO Solution Set integrates demonstration projects and programs, provides validation of mature solutions, and demonstrates implementation alternatives for the NAS. This program provides agility and flexibility in demonstrating alternative technologies and concepts, while supporting procedures and standards development. It also provides for the integration of near-term emerging technologies, procedures, and customers' initiatives with on-going demonstrations. The demonstration program leverages the individual project demonstrations and supports the integration of these individual projects into multiple-domains designed to capture the synergies that are needed to provide timely NAS transformation. Activities under the DEMO effort support a number of operational and laboratory demonstrations of advanced NextGen capabilities across the solution sets. Projects that support international interoperability goals and objectives by demonstrating advanced NextGen concepts with global partners, such as the Atlantic Interoperability Initiative to Reduce Emissions (AIRE) and the Asia and Pacific Initiative to Reduce Emissions (ASPIRE), are funded under the NextGen DEMO budget line. The Unmanned Aircraft Systems (UAS) 4D Trajectory Based

Demonstration is also conducted with funding from this budget line. The NextGen DEMO crosses all aspects of NAS automation, communications, navigation, surveillance, and weather. The demonstrations support the NextGen programs across the board, through concept exploration, evaluation, development, and mission support and always includes external partners such as air-framers, avionics manufactures, ATC manufacturers, and users. As part of concept exploration these demonstrations are precursors to the acquisition and development phase of our IT investments. The NextGen DEMO solution set is a Research and Development effort (very early planning phase) and therefore dependencies have not been formally established and are subject to change. Such dependencies will be clearly identified for NextGen transformational programs that are reported in their own Exhibit 300.

2. How does this investment close in part or in whole any identified performance gap in support of the mission delivery and management support areas? Include an assessment of the program impact if this investment isn't fully funded.

The DEMO solution set will increase efficiency and reduce congestion across the NAS. DEMO will improve bad weather departure and landing capacity with new technologies and procedures. It will also help reduce the number of fatal accidents in general aviation by implementing technologies and systems that will help pilots operate aircraft as safely as possible, and will reduce the risk of runway incursions by modifying and improving existing surface movement infrastructure. The UAS Demonstration Program is working with local governments and airspace users to provide increased capacity in the United States airspace system that reduces congestion and meets projected demand in an environmentally sound manner. Reducing funding would delay benefits beyond the 2012-2018 plan.

3. Provide a list of this investment's accomplishments in the prior year (PY), including projects or useful components/project segments completed, new functionality added, or operational efficiency achieved.

High Density Airport Capacity and Efficiency Improvement Project (3D PAM & Tailored Arrivals) - Completed the final cost-benefit analysis for tailored arrivals and completed an air traffic controller human-in-the-loop (HITL) simulations for real-world uncertainties; Unmanned Aircraft Systems (UAS) 4D Trajectory Based Demonstration - Delivered hardware integration plan for 4D Trajectory into Unmanned Aircraft Systems FMS; International Air Traffic Interoperability effort completed the Initial 4D FMS Data Analysis Report; Completed the Flight Deck HITL simulation F2-3 and the Flight Deck HITLS F3-2 (RJ) Primary and Secondary Clearances for 3D Path Arrival Management (PAM); Completed the second version of the concept of use, document for 3D PAM; Completed the Flight Deck HITL simulation F2-3 (A320); Delivered the Flight Deck HITLS F3-2 (RJ) primary and secondary clearances; Wrote the Flight Trial - 2D aircraft EDA validation report.

4. Provide a list of planned accomplishments for current year (CY) and budget year (BY).

Develop and deliver ASPIRE Annual Report Performance Metrics; Continue to collect metrics and evaluate the amount of jet fuel being reduced by the AIRE partnership demonstrations; Deliver the AIRE demonstration report; Conduct the US Air Force Air Mobility Command Demonstrations; Conduct the RNAV/RNP Terminal Area Demonstration, including the Final Report.

5. **Provide the date of the Charter establishing the required Integrated Program Team (IPT) for this investment. An IPT must always include, but is not limited to: a qualified fully-dedicated IT program manager, a contract specialist, an information technology specialist, a security specialist and a business process owner before OMB will approve this program investment budget. IT Program Manager, Business Process Owner and Contract Specialist must be Government Employees.**

2011-03-01

Section C: Summary of Funding (Budget Authority for Capital Assets)

1.

Table I.C.1 Summary of Funding

	PY-1 & Prior	PY 2011	CY 2012	BY 2013
Planning Costs:	\$114.6	\$15.8	\$15.0	\$24.6
DME (Excluding Planning) Costs:	\$0.0	\$0.0	\$0.0	\$0.0
DME (Including Planning) Govt. FTEs:	\$0.0	\$0.0	\$0.0	\$0.0
Sub-Total DME (Including Govt. FTE):	\$114.6	\$15.8	\$15.0	\$24.6
O & M Costs:	\$0.0	\$0.0	\$0.0	\$0.0
O & M Govt. FTEs:	\$0.0	\$0.0	\$0.0	\$0.0
Sub-Total O & M Costs (Including Govt. FTE):	0	0	0	0
Total Cost (Including Govt. FTE):	\$114.6	\$15.8	\$15.0	\$24.6
Total Govt. FTE costs:	0	0	0	0
# of FTE rep by costs:	0	0	0	0
Total change from prior year final President's Budget (\$)		\$-6.2	\$-10.0	
Total change from prior year final President's Budget (%)		-28.13%	-40.00%	

2. If the funding levels have changed from the FY 2012 President's Budget request for PY or CY, briefly explain those changes:

FY12 funding reduced due to FY12 appropriation adjustment as well as removal of DOT infrastructure adjustment.

Section D: Acquisition/Contract Strategy (All Capital Assets)

Table I.D.1 Contracts and Acquisition Strategy

Contract Type	EVM Required	Contracting Agency ID	Procurement Instrument Identifier (PIID)	Indefinite Delivery Vehicle (IDV) Reference ID	IDV Agency ID	Solicitation ID	Ultimate Contract Value (\$M)	Type	PBSA ?	Effective Date	Actual or Expected End Date
Awarded		DTFAWA-07-C-00010									
Awarded		DTFAWA-10-D-00033									
Awarded		DTFAWA-10-D-00030									
Awarded		DTFAWA-10-O-D-00030 (A)									
Awarded		DTFAWA-10-O-D-00030 (B)									
Awarded		DTFAWA-10-O-D-00030 (C)									
Awarded		DTFAWA-08-C-00049 (MCR)									
Awarded		DTFAWA-08-A-80010 (United)									
Awarded		DTFAWA-10-A-80014									
Awarded		DTFAWA-10-A-80008									

2. If earned value is not required or will not be a contract requirement for any of the contracts or task orders above, explain why:

FAA's AMS includes policy and guidance on the utilization of EVM, and EVM is applied to NextGen investments in accordance with this policy. Once programs are approved and baselined, EVM is conducted in accordance with FAA and DOT policy. Investments described in this Exhibit are managed in the NextGen Portfolio Management Framework which requires project level agreements (PLAs) that document project scope, purpose, planned cost, major milestones and relationships to other programs and the NAS EA. This information is maintained in an automated tool where project managers provide monthly status on activities. The data maintained in the tool provides an annual master milestone list and current status information. For each activity a project plan and a supporting project schedule are developed to document major milestones,

decisions and deliverable.

Exhibit 300B: Performance Measurement Report

Section A: General Information

Date of Last Change to Activities: 2012-08-23

Section B: Project Execution Data

Table II.B.1 Projects					
Project ID	Project Name	Project Description	Project Start Date	Project Completion Date	Project Lifecycle Cost (\$M)
G08M0101	Demonstration and Infrastructure Development - Future Planning	The NextGen Demonstrations and Infrastructure Development program is designated to integrate demonstration projects and programs, provide validation of mature solutions, and demonstrate implementation alternatives for the National Airspace System (NAS). This program provides agility and flexibility in demonstrating alternative technologies and concepts while supporting procedure and standards development, as well as providing for the integration of near-term emerging technologies, procedures and/or customer initiatives with ongoing demonstrations. The demonstration program leverages the individual project demonstrations and supports the integration of these individual projects into multiple domains designed to capture the synergies that are needed to provide timely			

Table II.B.1 Projects

Project ID	Project Name	Project Description	Project Start Date	Project Completion Date	Project Lifecycle Cost (\$M)
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NAS transformation.

Activity Summary

Roll-up of Information Provided in Lowest Level Child Activities

Project ID	Name	Total Cost of Project Activities (\$M)	End Point Schedule Variance (in days)	End Point Schedule Variance (%)	Cost Variance (\$M)	Cost Variance (%)	Total Planned Cost (\$M)	Count of Activities
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G08M0101

Demonstration and Infrastructure Development - Future Planning

Key Deliverables

Project Name	Activity Name	Description	Planned Completion Date	Projected Completion Date	Actual Completion Date	Duration (in days)	Schedule Variance (in days)	Schedule Variance (%)
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NONE

Section C: Operational Data

Table II.C.1 Performance Metrics								
Metric Description	Unit of Measure	FEA Performance Measurement Category Mapping	Measurement Condition	Baseline	Target for PY	Actual for PY	Target for CY	Reporting Frequency

NONE